

IN THE CLAIMS:

Please amend the claims as shown in the following claims listing.

1. (Currently amended) A system, comprising:
a node including an active device, an interface to an inter-node network, a system memory, and an address network and a data network that is separate from the address network, coupling the active device, the interface, and the system memory;
an additional node coupled to the node by the inter-node network;
wherein in response to receiving from the active device an address packet initiating a transaction to gain an access right to a coherency unit, the system memory is configured to send a report corresponding to the address packet to the interface if the transaction cannot be satisfied within the node;
wherein the interface is configured to ignore the address packet and to send a coherency message requesting the access right to the additional node via the inter-node network in response to the report.
2. (Currently amended) The system of claim 1, wherein the node includes a data network coupling the active device, the interface, and the system memory, and wherein the system memory is configured to send the report to the interface in a data packet.
3. (Currently amended) The system of claim 1, wherein the address packet is a read-to-own packet, the access right is a write access right, and wherein the system memory is configured to send the report corresponding to the read-to-own packet to the interface if a global access state of the coherency unit in the node is any global access state other than a modified global access state.

4. (Original) The system of claim 3, wherein the node includes an additional active device, wherein the additional active device is configured to transition a read access right to the coherency unit to an invalid access right upon receipt of the read-to-own packet.
5. (Original) The system of claim 3, wherein the address network is configured to convey the read-to-own packet in broadcast mode, wherein the active device is configured to gain an ownership responsibility for the coherency unit upon receipt of the read-to-own packet.
6. (Original) The system of claim 5, wherein an additional interface included in the additional node is configured to receive the coherency message on the inter-node network, wherein the additional interface is configured to send a proxy address packet on an address network included in the additional node in response to the coherency message.
7. (Original) The system of claim 3, wherein in response to sending the coherency message, the interface is configured to receive an additional coherency message on the inter-node network;
wherein in response to the additional coherency message, the interface is
configured to send data corresponding to the coherency unit to the active device.
8. (Original) The system of claim 7, wherein the active device is configured to gain the write access right to the coherency unit upon receipt of the data.
9. (Currently amended) The system of claim 7, wherein the interface is further configured to send data corresponding to the coherency unit to the system memory in response to the additional coherency message, wherein in response to the data, the system memory is configured to update the global access state of the coherency unit in the node to the modified global access state.

10. (Currently amended) The system of claim 3, wherein the system memory is configured to send data corresponding to the coherency unit to the active device if the global access state is the modified state and if the system memory has an ownership responsibility for the coherency unit, wherein the active device is configured to gain the write access right upon receipt of the data.
11. (Currently amended) The system of claim 1, wherein the address packet is a read-to-share packet, the access right is a read access right, and wherein the system memory is configured to send the report corresponding to the read-to-share packet to the interface if a global access state of the coherency unit in the node is not a modified global access state or a shared global access state.
12. (Currently amended) The system of claim 1, wherein the interface is configured to add a record corresponding to the report to an outstanding transaction queue in response to receiving the report;
- wherein the interface is configured to add a record to the outstanding transaction queue in response to each address packet specifying a coherency unit that is not mapped by the system memory.
13. (Original) The system of claim 12, wherein the interface is configured to send a corresponding coherency message on the inter-node network in response to each record in the outstanding transaction queue.
14. (Currently amended) A node for use in a multi-node system, the node comprising:
- a plurality of devices including a system memory, an active device, and an interface configured to send and receive coherency messages on an inter-node network coupling nodes in the multi-node computer system;
 - an address network configured to convey address packets between the plurality of devices;
 - a data network that is separate from the address network and configured to convey data packets between the plurality of devices;

wherein in response to receiving from the active device an address packet initiating a transaction to gain an access right to a coherency unit, the system memory is configured to send a report corresponding to the address packet to the interface if the transaction cannot be satisfied within the node;

wherein the interface is configured to ignore the address packet and to send a coherency message requesting the access right on the inter-node network in response to the report.

15. (Currently amended) The node of claim 14, wherein the node includes a data network coupling the active device, the interface, and the system memory, and wherein the system memory is configured to send the report to the interface in a data packet.

16. (Currently amended) The node of claim 14, wherein the address packet is a read-to-own packet, the access right is a write access right, and wherein the system memory is configured to send the report corresponding to the read-to-own packet to the interface if a global access state of the coherency unit in the node is any global access state other than a modified global access state.

17. (Original) The node of claim 16, wherein the node includes an additional active device, wherein the additional active device is configured to transition a read access right to the coherency unit to an invalid access right upon receipt of the read-to-own packet.

18. (Original) The node of claim 16, wherein the address network is configured to convey the read-to-own packet in broadcast mode, wherein the active device is configured to gain an ownership responsibility for the coherency unit upon receipt of the read-to-own packet.

19. (Original) The node of claim 16, wherein in response to sending the coherency message, the interface is configured to receive an additional coherency message on the inter-node network;

wherein in response to the additional coherency message, the interface is configured to send data corresponding to the coherency unit to the active device.

20. (Original) The node of claim 19, wherein the active device is configured to gain the write access right to the coherency unit upon receipt of the data.

21. (Currently amended) The node of claim 19, wherein the interface is further configured to send data corresponding to the coherency unit to the system memory in response to the additional coherency message, wherein in response to the data, the system memory is configured to update the global access state of the coherency unit in the node to the modified global access state.

22. (Currently amended) The node of claim 16, wherein the system memory is configured to send data corresponding to the coherency unit to the active device if the global access state is the modified state and if the system memory has an ownership responsibility for the coherency unit, wherein the active device is configured to gain the write access right upon receipt of the data.

23. (Currently amended) The node of claim 14, wherein the address packet is a read-to-share packet, the access right is a read access right, and wherein the system memory is configured to send the report corresponding to the read-to-share packet to the interface if a global access state of the coherency unit in the node is not a modified global access state or a shared global access state.

24. (Currently amended) The node of claim 14, wherein the interface is configured to add a record corresponding to the report to an outstanding transaction queue in response to receiving the report;

wherein the interface is configured to add a record to the outstanding transaction queue in response to each address packet specifying a coherency unit that is not mapped by the system memory.

25. (Original) The node of claim 24, wherein the interface is configured to send a corresponding coherency message on the inter-node network in response to each record in the outstanding transaction queue.

26. (Currently amended) A method of operating a multi-node system, wherein the multi-node system includes a node and an additional node coupled by an inter-node network, the method comprising:

- an active device in the node initiating a transaction to gain an access right to a coherency unit by sending an address packet on an address network within the node;

- an interface in the node ignoring the address packet;

- in response to said sending the address packet, a system memory in the node sending, via a data network that is separate from the address network using a data packet, a report corresponding to the address packet to the interface if the transaction cannot be satisfied within the node; and

- in response to the report, the interface sending a coherency message to an additional interface in the additional node via the inter-node network, wherein the coherency message requests the access right to the coherency unit.

27. (Currently amended) The method of claim 26, wherein the node includes a data network coupling the active device, the interface, and the system memory, and wherein said sending the report comprises the system memory sending a data packet containing the report to the interface via the data network.

28. (Currently amended) The method of claim 26, wherein the address packet is a read-to-own packet, the access right is a write access right, and wherein the method further comprises the system memory determining that the transaction cannot be satisfied within the node if a global access state of the coherency unit in the node is any global access state other than a modified global access state.

29. (Original) The method of claim 28, wherein the node includes an additional active device, wherein the method comprises the additional active device transitioning a read access right to the coherency unit to an invalid access right upon receipt of the read-to-own packet.
30. (Original) The method of claim 29, further comprising:
the address network conveying the read-to-own packet in broadcast mode; and
the active device gaining an ownership responsibility for the coherency unit upon receipt of the read-to-own packet.
31. (Original) The method of claim 30, further comprising:
an additional interface included in the additional node receiving the coherency message on the inter-node network; and
the additional interface sending a proxy address packet on an additional address network included in the additional node in response to the coherency message.
32. (Original) The method of claim 28, further comprising:
the interface receiving an additional coherency message on the inter-node network, wherein the additional coherency message is responsive to the coherency message;
in response to the additional coherency message, the interface sending data corresponding to the coherency unit to the active device.
33. (Original) The method of claim 32, further comprising the active device gaining the write access right to the coherency unit upon receipt of the data.
34. (Currently amended) The method of claim 32, further comprising:
the interface sending data corresponding to the coherency unit to the system memory in response to the additional coherency message; and

in response to the data, the system memory updating the global access state of the coherency unit in the node to the modified global access state.

35. (Currently amended) The method of claim 28, further comprising:
the system memory sending data corresponding to the coherency unit to the active device if the global access state is the modified state and if the system memory has an ownership responsibility for the coherency unit; and
the active device gaining the write access right upon receipt of the data.
36. (Original) The method of claim 26, wherein the address packet is a read-to-share packet, the access right is a read access right, and wherein said sending the report occurs if a global access state of the coherency unit in the node is not a modified global access state or a shared global access state.
37. (Currently amended) The ~~system~~ method of claim 26, further comprising:
the interface adding a record corresponding to the report to an outstanding transaction queue in response to receiving the report; and
the interface adding a record to the outstanding transaction queue in response to each address packet specifying a coherency unit that is not mapped by the system memory.
38. (Original) The method of claim 37, further comprising the interface sending a corresponding coherency message on the inter-node network in response to each record in the outstanding transaction queue.